

Format for Submitting Electronic Updates to the National Highway-Rail Crossing Inventory File

The various methods for submitting updates to the US DOT National Highway-Rail Crossing Inventory File include (1) hardcopy using the Crossing Inventory Form, (2) letter or email for a small number of updates for a single field (like closing a list of crossings), (3) Excel files for a limited number of fields (such as updating Latitude and Longitude), (4) electronically using the GX32 software generated upload files (GX32 is FRA's Highway-Rail Crossing Data Maintenance System using a Windows compatible personal computer), and (5) by submitting State or Railroad generated electronic update files from the submitter's database file in the acceptable FRA Inventory Format using either a .mdb or .txt formatted file structure.

The following instructions are for preparing State or Railroad generated electronic file for submitting updates to the National Highway-Rail Crossing Inventory file.

Instructions for Formatting an Electronic National Inventory Update File

1. The update file layout must follow the "Field Specification" document (U.S. DOT Crossing Inventory Form - Data File Structure and Field Input Specification) located at <http://safetydata.fra.dot.gov/OfficeofSafety/>, Downloads, FRA Database File Structure, Form F 6180.71 Highway Rail Crossing Inventory.
2. If an .mdb file is generated:
 - a. All fields must be Text (even if a field is Numeric in the FRA Inventory File Format).
 - b. The same Field Names and Field Sizes must be used for the valid values and ranges as defined in the "Field Specification" document.
3. If a particular field is not being updated, that field must be completely filled with asterisks (*) in the defined field length, (e.g., HIGHWAY: "*****", GATES "***"). This applies to fields that are both Character and Numeric as defined in the Field Specification.
4. If a field in the Field Specification does not represent an item on the current Inventory Form (internal processing examples: EDATE, BATCH), or because it is an obsolete field (obsolete examples: DAYSWT, XBUCKRF, GATERW), then the field must be completely filled with asterisks or left completely blank. Fields coded like this will be ignored (if in ASCII positional) and no change in data will occur. Fields on the current Inventory Form will have an item number in the Item Number column of the Field Specification document.

5. If the field being updated is a Character field, then:
 - a. For an ASCII positional file, enter the desired data starting at ASCII start position, and then follow it with blanks to the ASCII end position (e.g., HIGHWAY: "SH-1 "). If the information is to be deleted and made blank, fill the field size with the exact number of blank spaces (e.g., there is data in the HIGHWAY field, and it is to be deleted and made blank. It needs to be indicated as " " where the number of blank spaces match the size of the field.)
 - b. For an .mdb file, ????
6. If the field being updated is a Numeric field, then:
 - a. For an ASCII positional file, pad field or values with leading 0's (e.g., DAYTHRU: "02"). When deleting a value, enter all 0's (e.g., DAYTHRU: "00"). Enter asterisks (*) if the field is not to be updated. If a field is submitted as blank spaces, it will be ignored and the current data will not be changed.
 - b. For a .mdb file, just enter the value (e.g. DAYTHRU = "2"), or enter "0" to delete a value in the field, or enter asterisks (*) if the field is not to be updated. If a field is submitted as blank spaces, it will be ignored and the current data will not be changed.
7. Data must be provided for the following fields for every crossing update being submitted: INIT, CROSSING, REASON, EFFDATE, STATE, CNTYCD, RAILROAD. Then provide the data for the fields to be updated.
8. Special Instructions:
 - a. Latitude and Longitude: Submit Latitude and Longitude, in Degrees.Decimal-degrees, with the explicit decimal, with the “-“ sign for Longitude, and at least 6 or 7 decimal digits, preferably 7 digits after the decimal point.

Latitude (LATITUDE): xx.xxxxxxx (e.g., 35.3014865)
 Longitude (LONGITUD): -xxx.xxxxxxx (e.g., -085.2802014)
 - b. Another Railroad Operating thru the Same Crossing, or having a Separate Track thru the Crossing (SEPRR and SAMERR): Each of these fields is a 16 character field and can contain up to four valid railroad codes. If any railroad code is less than 4 characters, follow the last character of the code with blank spaces to insure that the code takes up four spaces. Also, any unused code spaces will need to have four blank spaces included. For example, if SEPRR is to contain UP and BNSF, populate this field as follows: “UP BNSF “ where there are two blank spaces after UP and an additional eight blank spaces after BNSF.

9. Common Errors encountered during processing:
 - a. Number of Daily Train Movements (TOTALTRN, TOTALSWT, DAYTHRU):
The field “TOTALTRN” must be greater than or equal to the sum of TOTALSWT + DAYTHRU, otherwise, an error will be generated which will have to be corrected before the data can be processed. Data should be provided for all three train movement fields when updating the Number of Daily Train Movements.
 - b. Speed of Train at Crossing (MINSPD, MAXSPD, MAXTTSPD):
MAXSPD must be less than or equal to MAXTTSPD, and MINSPD must be less than MAXSPD, otherwise, an error will be generated which will have to be corrected before the data can be processed. It is advisable to provide data for all three train speed fields when updating Speed of Train at Crossing.
10. There are two record layouts that may be used for an update file. These are:
 - a. Record Layout A: With this layout, a single record will have all the updates for a particular crossing. This layout must follow the FRA Inventory Format, in which all fields in a record are for a single crossing. With this type of layout, if there are 10 crossings that are being updated, then the update file will have 10 records in it.
 - b. Record Layout B: With this layout, each record will have a single update for a crossing, which has a field “FIELDUPD” that has the name of the field being updated, and then a field containing the update value “UPDATVAL.” With this layout format, if 10 crossing are being updated, and 10 fields are being updated for each of the first 8 crossings, and 1 update for the 9th crossing, and 51 fields for the 10th or last crossing, the update file will consist of $80 + 1 + 51 = 132$ records.

For Record Layout B, do not submit a record for a field that is not to be updated. Thus, do not fill the UPDATVAL with asterisks (*) to indicate that the field is not being updated. If UPDATVAL is left blank, or filled with spaces, and FIELDUPD is a Character field, it will be interpreted as update to blank-out or delete a value. If UPDATVAL is left blank, or filled with spaces, and FIELDUPD is a Numeric field, it will be ignored, and no update will be made for this record. The Record Layout B format is provided in Attachment A.
11. The update file name needs to be in the following format:
XNG | RR OR STATE ABBREVIATION | MMDDYY.MDB (or .TXT)
(e.g., XNGWI061603.mdb where the .mdb format file starts with “XNG” submitted by the State of Wisconsin on June 16, 2003)
12. The upload file should be emailed to Support@frasafety.net and copied to Amamani@frasafety.net. Specify the number of records being submitted, date submitted, the submitting agency, and contact information for the person sending the file.

Alternatively, the updated file can be mailed on magnetic media (disk or CD) to:

Inventory Crossing Updates
FRA Project Office
Creative Information Technology, Inc.
4601 N. Fairfax Drive, Suite 1100
Arlington, VA 22203.

13. For assistance, contact the FRA Project Office at 888-372-9393,
or email at Support@frasafety.net .

Attachment A **Record Layout B**

The file format for Record Layout B is:

<u>Field Name</u>	<u>Type</u>	<u>Width</u>	<u>Start (End) for ASCII</u>	<u>Description</u>
INIT	TEXT	1	1 (1)	Initiating Agency
CROSSING	TEXT	7	2 (8)	Crossing Number
REASON	TEXT	1	9 (9)	Reason
EFFDATE	TEXT	6	10 (15)	Effective Date (YYMMDD)
STATE	TEXT	2	16 (17)	State (FIPS Code)
CNTYCD	TEXT	4	18 (21)	County (FIPS Code)
RAILROAD	TEXT	4	22 (25)	Railroad Code
TYPEXING	TEXT	1	26 (26)	Type of Crossing
POSXING	TEXT	1	27 (27)	Position of Crossing
UPDATFLD	TEXT	15	28 (42)	Name of Field to be Updated
UPDATVAL	TEXT	20	43 (62)	Updated Data

1. Follow these Instructions except:
 - a. When a field is not being updated (it has to be filled with asterisks for Record Layout A), it does not have to be filled with asterisks for Record Layout B.
 - b. Use the Name file:
XNGALT | RR OR STATE ABBREVIATION | MMDDYY.MDB (or
.TXT) (e.g., XNGALTBNSF061603.txt).
2. The value in UPDATFLD is the name of the field being updated. The names must be those contained in the “Field Specification” document.
3. The value in UPDATVAL field must follow the input specifications and field sizes contained in the “Field Specification” document.
4. If the Narrative field (NARR) is to be updated, and the narrative information text is more than 20 characters, provide the information in a separate file named

XNGNAR | RR OR STATE ABBREVIATION | MMDDYY.MDB (or .TXT)
with the following format:

<u>Field Name</u>	<u>Type</u>	<u>Width</u>	<u>Start (End) for ASCII</u>	<u>Description</u>
INIT	TEXT	1	1 (1)	Initiating Agency
CROSSING	TEXT	7	2 (8)	Crossing Number
REASON	TEXT	1	9 (9)	Reason
EFFDATE	TEXT	6	10 (15)	Effective Date (YYMMDD)
NARR	TEXT	100	16 (115)	Narrative